

Odor control

Wastewater treatment is essential to protect public health and the environment

As our population grows, we need a new wastewater treatment plant called Brightwater to protect our health, environment, and economic growth. After four years of careful analysis and public review, King County Executive Ron Sims selected a 114-acre site next to Route 9 near Woodinville for the new Brightwater Treatment Plant. Brightwater will be built and operating by 2010. The system consists of a new treatment plant, conveyance pipes, and marine outfall in Puget Sound.

Brightwater will not release odor

King County is committed to developing and operating facilities that are a good neighbor to residents. Modern wastewater plants can, in fact, be good neighbors that fit into the community and operate without odors. San Francisco's Oceanside Pollution Control Plant sits alongside popular public attractions, including the San Francisco Zoo and Pacific coastline beaches. The plant has not received any odor complaints from the community.

Our odor control standards for the plant are the most stringent in the United States. King County is designing an odor control system so Brightwater will operate 24 hours a day, seven days a week, 365 days a year without producing odors. And we have listened to community concerns and modified our design in response. We will set similar odor control goals for the conveyance system.

Brightwater will use the most advanced existing odor control technology

At the heart of Brightwater's design is a multiphase approach to prevent odors. Brightwater will eliminate odors in three phases.

- Prevent odors from forming

We will add chemicals, such as a strong form of household bleach, to the wastewater stream to prevent odors from forming.

- Capture air

As a direct result of community comments, our updated design includes covering or enclosing all odor sources to capture odors and prevent their release. All odorous air will be vented to an odor control system and treated before release to the atmosphere.

- Treat odorous air

Brightwater will use multistage odor control scrubbing. Equipment used to treat odors is called a "scrubber." At Brightwater, we will use a three-stage wet-chemical scrubber. The odorous air will go through a "mist" of a cleaning solution in three different scrubbing stages. In each phase, a different solution will target and remove specific odor-compounds. The air will then go through a final carbon scrubber to remove trace odors. This last stage is called "polishing."

Brightwater odor control will set a new standard

Most treatment plants use a one- or two-stage odor scrubbing process on only some of their odor sources and cover only the most odorous sources. But Brightwater will surpass other facilities by covering all processes and using a three-stage wet scrubber plus a final carbon-filter polishing stage to remove residual odors on virtually all odor sources.

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Odor control

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No odors — 24/7 — 365 days a year

- **Extra odor control**

Redundant or back-up systems will be included in the design. If, for example, an odor prevention unit is being repaired or under maintenance, another unit will be available for use. We will capture — and treat — odors from the whole plant, even during maintenance.

- **Designed for imaginary “worst case” day**

We took the worst day for potential odor (a hot August day) and the worst day for air dispersion (a stagnant fall day) and combined them in our modeling to make sure Brightwater won’t smell — even during that unlikely scenario. Brightwater will not rely on winds to disperse odor. Odors are eliminated at the scrubber rather than relying on air dispersion.

Safeguards are in place to ensure that Brightwater will be a good neighbor

- **Regular monitoring will ensure odor is eliminated**

Once the plant is operating, hydrogen sulfide levels will be monitored with sophisticated equipment to ensure that no odors are emitted from the plant site. Hydrogen sulfide is the compound that causes a rotten egg smell. In addition, staff will perform “spot checks” to measure odors in various parts of the plant.

- The Puget Sound Clean Air Authority (PSCAA) regulates nuisance odors that may affect people or property and enforces local and state law. PSCAA maintains a record of odor complaints by zip code and can take enforcement action against offenders.

- **Your ideas are in the plan**

We’re listening to your concerns. In response to a citizen request, King County will put money into a reserve fund to add more odor controls if odor prevention goals aren’t met. The process for evaluating and using reserve funding will be clearly established after the final site decision is made. The money, if needed, would be used to further refine the odor control systems. We will continue to seek new ideas from the community.

For more information or to be added to our mailing list, please contact:

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**This information is available in alternative formats upon
request by calling 206-684-1280 or Relay Service 711**